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54. (Currently Amended) In a system in which a plurality of files are distributed across a plurality of computers a method comprising:

obtaining a name for a data file, the name being based at least in part on a given function of the data, wherein the data used by the given function to determine the name [which] comprises the contents of the data file; and

in response to a request for the a data file, the request including at least the name of the particular file, causing a copy of the file to be provided from a given one of the plurality of computers.

55. (Currently Amended) A method, in a system in which a plurality of files are distributed across a plurality of computers, wherein data in a file in the system may represent a digital message, a digital image, a video signal or an audio signal, the method comprising:

obtaining a name for a data file, the name having been determined using an MD5 function of the data, wherein the data used by the MD5 function [which] comprises the contents of the data file; and

in response to a request for the data file, the request including at least the name of the data file, providing a copy of the data file from a given one of the plurality of computers, said providing being based at least in part on the [determined] obtained name.

56. (Currently Amended) A method, in a system in which a plurality of files are distributed across a plurality of computers, wherein some of the computers communicate with each other using a TCP/IP communication protocol, the method comprising:

obtaining a name for a ~~particular~~ data file, the contents of said data file representing a digital image, the name being determined using at least a given

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function of the data, wherein the data used by the given function to determine the name [which] comprises the contents of the particular data file; and

in response to a request for the ~~particular~~ data file, the request including at least the name of the ~~particular~~ data file, providing a copy of the particular file from a given one of the plurality of computers.

57. (Currently Amended) A method comprising:

causing a plurality of files to be distributed across a plurality of computers;

obtaining a name for a ~~particular~~ file, the name having been determined using a given function of the data, wherein the data used by the given function to determine the name [which] comprises the contents of the particular file; and

in response to a request for the ~~particular~~ file, the request including at least the name of the ~~particular~~ file, causing the ~~particular~~ file to be provided from a given one of the plurality of processors.

58. (Currently Amended) A method, in a system in which a plurality of files are distributed across a plurality of computers the method comprising:

obtaining a name for a ~~particular~~ file, the name being determined using a given function of the data, wherein the data used by the given function to determine the name [which] comprises the contents of the particular file; and

in response to a request for the particular file, the request including at least the name of the ~~particular~~ file, providing the ~~particular~~ file from a given one of the computers, wherein the contents of the particular file may represent a digital message, a digital image, a video signal or an audio signal.

59. (Currently Amended) A method, in a network comprising a plurality of computers, some of the computers functioning as servers and some of the computers functioning as clients, wherein some computers in the network

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communicate with each other using a TCP/IP communication protocol, wherein a key is required to identify a file on the network, the method comprising:

storing some files on a first computer in the network and storing copies of some of the files from the first computer on a set of computers distinct from the first computer ;

for a particular file, determining a different cache key from an ordinarily used key for the file, the different key being determined at least in part using a message function MD5 of the data, wherein the data used by the function to determine the name [which] comprises the contents of the particular file; and

responsive to a request for the particular file, the request including the different key for the file, causing the particular file to be provided to the requestor,

wherein the contents of the file may represent: a page in memory, a digital message, a digital image, a video signal or an audio signal.

60. (Currently Amended) A method comprising:

distributing a set of files from a first computer across a network of computers distinct from the first computer ;

applying an MD5 function to the contents of a ~~particular~~ file to obtain a True Name for the file;

in response to a request for the ~~particular~~ file, the request including at least the True Name of the particular file, causing a copy of the particular file to be provided from a given one of the computers , wherein the request for the particular file is resolved based, at least in part, on a measure of availability of at least one of the computers.

61. (Currently Amended) A method as in claim 60 wherein the measure of availability for a computer is based on at least one of the measurements selected from:

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- (a) a measurement of bandwidth to the computer ;
- (b) a measurement of a cost of a connection to the computer , and
- (c) a measurement of reliability of a connection to the computer .

62. (Currently Amended) A content delivery method comprising:
distributing a plurality of files across a network of computers ;
for a particular file, determining a True Name using at least a given
function of the data, wherein the data used by the function to determine the name
[which] comprises the contents of the particular file;
obtaining a request for the particular file, the request including at least the
True Name of the particular file; and
responsive to the request, causing the particular file to be provided from
one of the servers of the network of computers.

63. (Currently Amended) A content delivery method, comprising:
distributing files across a network of servers;
for a particular file having a contextual name specifying a location in the
network at which the file may be located, determining another name for the
particular file, the other name including a data identifier determined using a given
function of the data, where said data used by the given function to determine the
other name comprises the contents of the particular file;
obtaining a request for the particular file, the request including the
contextual name and the other name of the particular file,
responsive to the request, providing the particular file from one of the
servers of the network of servers, said providing being based, at least in part, on
the other name of the particular item.

64. (Currently Amended) A content delivery method, comprising:
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distributing a set of files across a network of servers;

for a particular file representing a digital image, the file having a contextual name specifying a location in the network at which the file may be located, determining another name for the particular file, the other name including a True Name for the file which was determined using a message digest function of the data, where [said] the data used by the given function comprises the contents of the particular file;

obtaining a request for the particular file, the request including at least the contextual name and the True Name of the particular file; and

responsive to the request, providing the particular file from one of the servers of the network of servers, said providing being based at least in part on the True Name of the particular item.

65. (Previously Added) A method comprising:

applying an MD5 function to the contents of an image file containing data representing a digital image to obtain a True Name for the file

distributing copies of the image file from a first server across a network of servers distinct from the first server;

obtaining a request for the image file, the request including at least the True Name of the file; and

responsive to the request, causing a copy of the image file to be provided from one of the servers of the network of servers.

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66. (Previously Added) A method as in claim 54, wherein the requested file is only provided to authorized or licensed parties.

67. (Previously Added) A method as in claim 54, wherein the requested file is not provided to unlicensed or unauthorized parties.

68. (Previously Added) A method as in claim 54 further comprising:
determining, using at least the name, whether a copy of the data file is present on a particular one of said computers.

69. (Previously Added) A method as in claim 54 further comprising:
determining, using at least the name, whether an authorized or licensed copy of the data file is present on a particular one of said computers.

70. (Currently Amended) A method, in a system in which a plurality of files are distributed across a plurality of computers, the method comprising:
obtaining a name for a data file, the name being based at least in part on a given function of the data, wherein the data used by the function [which] comprises the contents of the particular file;
determining, using at least the name, whether a copy of the data file is present on a at least one of said computers; and
determining whether a copy of the data file that is present on a at least one of said computers is an authorized or licensed copy of the file

71. (Presently canceled)

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72. (Presently Amended) A method as in claim ~~71~~ 70 further comprising:

allowing the file to be provided from one of the computers having an authorized or licensed copy of the file.

73. (Previously Added) A method as in claim 70 wherein at least some of the plurality of computers comprise a peer-to-peer network.

74. (Previously Added) A method, in a system in which a plurality of files are distributed across a plurality of computers which form a peer-to-peer network, the method comprising:

obtaining a TrueName for a data file, the TrueName being based at least in part on a given function of the data, wherein the data used by the given function [which] comprises the contents of the particular file; and

determining, using at least the name, whether a licensed or authorized copy of the data file is present on a particular computer.

75. (Currently Amended) A method comprising:

obtaining a name for a data file, the name being based at least in part on a function of the data, wherein the data used by the function [which] comprise at least the contents of the file; and

in response to a request for the data file, the request including at least the obtained name of the data file, causing the contents of the data file to be provided from a computer having a licensed or authorized copy of the data file.

76. (Previously Added) A method as in claim 75 wherein the function is a message digest function or a hash function.

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77. (Previously Added) A method as in claim 75 wherein the function is selected from the functions: MD4, MD5, and SHA.

78. (Previously Added) A method as in claim 75 wherein the given function randomly distributes its outputs.

79. (Previously Added) A method as in claim 75 wherein the function produces a substantially unique value based on the data comprising the data file.

80. (Previously Added) A method as in claim 75 wherein a data file may comprise a file, a portion of a file, a page in memory, a digital message, a digital image, a video signal or an audio signal.

81. (Previously Added) A method as in claim 75 wherein certain processors in the network communicate with each other using a TCP/IP communication protocol.

82. (Previously Added) A method as in claim 75 wherein said name for said data file, as determined using said function, will change when the data file is modified.

83. (Previously Added) A method, in a system in which a plurality of files are distributed across a plurality of computers, the method comprising:
obtaining a name for a data file, the name being based at least in part on an MD5 function of the data which comprises the contents of the particular file;
determining, using at least the obtained name, whether an authorized or licensed copy of the data file is present on a at least one of said computers.

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84. (Currently Amended) A method comprising:
obtaining a list of file names, a file name for each of a plurality of files,
each of said file names having been determined, at least in part, by applying a
function to the contents of the corresponding file;
using at least said list to determine whether unauthorized or unlicensed
copies of some of the plurality of data files are present on a particular computer.
85. (Previously Added) A method as in claim 84 further comprising:
in response to a request for a particular data file, allowing the contents of
the data file to be provided from a computer determined to have a licensed or
authorized copy of the data file.
86. (Previously Added) A method as in claim 84 wherein the particular
computer is part of a peer-to-peer network of computers.
87. (Previously Added) A method as in claim 84 further comprising:
if the computer is found to have a file that it is not authorized or licensed to
have, recording information about the computer and about the file.
88. (Previously Added) A method as in claim 84 wherein the function is
a message digest function or a hash function.
89. (Previously Added) A method as in claim 84 wherein the function is
selected from the functions: MD4, MD5, and SHA.
90. (Previously Added) A method as in claim 84 wherein the given
function randomly distributes its outputs.

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91. (Previously Added) A method as in claim 84 wherein the function produces a substantially unique value based on the data comprising the data file.

92. (Currently Amended) A method comprising:
obtaining a list of True Names, one for each of a plurality of files;
for at least some computers that make up part of a peer-to-peer network of computers, comparing at least some of the contents of the computers to the list of True Names to determine whether unauthorized or unlicensed copies of some of the plurality of data files are present on those computers; and
based at least in part on said comparing, if a computer is found to have content that it is not authorized or licensed to have, recording information about the computer and about the unauthorized or unlicensed content.

93. (Previously Added) A method as in claim 92 wherein the True Names are determined using a message digest function or a hash function.

94. (Previously Added) A method as in claim 92 wherein the function is selected from the functions: MD4, MD5, and SHA.

95. (Currently Amended) A method comprising:
obtaining a list of True Names, one for each of a plurality of files, wherein, for each of the files, the True Name for that file is determined using an MD5 function of the contents of the file;
comparing at least some of the contents of a computer to the list of True Names to determine whether unauthorized or unlicensed copies of some of the plurality of data files are present on that computer; and

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based at least in part on said comparing, if a computer is found to have content that it is not authorized or licensed to have, recording information about the computer and about the unauthorized or unlicensed content.

96. (Currently Amended) A method comprising:

distributing a set of files from a first computer across a network of computers distinct from the first computer;

in response to a request for ~~the particular~~ a file, causing the ~~particular~~ file to be provided from a given one of the computers, wherein the request for the ~~particular~~ file is resolved based, at least in part, on a measure of availability of at least one of the computers, and wherein the measure of availability for a computer is based on at least one of the measurements selected from:

- (a) a measurement of bandwidth to the computer;
- (b) a measurement of a cost of a connection to the computer, and
- (c) a measurement of reliability of a connection to the computer.

97. (Currently Amended) A method as in claim 91 ~~96~~ wherein the request for the particular file includes at least a name determined as a function of the contents of the file.

98. (Previously Added) In a system in which a data file is distributed across a plurality of computers, a method comprising:

obtaining a name for the data file, the name being based at least in part on a given function of the data, wherein the data used by the function ~~which~~ comprise the contents of the data file;

determining, using at least the name, whether an authorized or licensed copy of the data file is present on a particular one of said computers.

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99. (Previously Added) A method as in claim 94, further comprising:
in response to a request for the data file, allowing a copy of the file to be
provided from a given one of the plurality of computers having an authorized or
licensed copy of the file.

100. (Previously Added) A method as in claim 54, further comprising:
maintaining accounting information relating to the data files.

101. (Currently Amended) A method as in claim 100 96, wherein the
maintaining of accounting information includes at least some of activities selected
from:

- (a) tracking which files have been stored on a computer; and
- (b) tracking which files have been transmitted from a computer.

102. (Currently Amended) Computer-readable media tangibly embodying
a program of instructions executable by at least one computer, the program
comprising code to:

obtain a name for a data file, the name being based at least in part on a
given function of the data, wherein the data used by the function ~~which~~ comprises
the contents of the data file; and

in response to a request for the a data file, the request including at least the
name of the particular file, cause a copy of the file to be provided from a given one
of the plurality of computers.

103. (Currently Amended) Computer-readable media tangibly embodying
a program of instructions executable by at least one computer, the program
comprising code to:

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obtain a TrueName for a data file, the TrueName being based at least in part on a given function of the data, wherein the data used by the function which comprises the contents of the particular file; and

determine, using at least the name, whether a licensed or authorized copy of the data file is present on a particular computer.

104. (Currently Amended) Computer-readable media tangibly embodying a program of instructions executable by at least one computer, the program comprising code to:

obtain a list of file names, one for each of a plurality of files, each of said file names having been determined, at least in part, by applying a function to the contents of the corresponding file; and

determine, using at least said list, whether unauthorized or unlicensed copies of some of the plurality of data files are present on a particular computer.

105. (Previously Added) Computer-readable media tangibly embodying a program of instructions executable by at least one computer, the program comprising code to:

obtain a name for the data file, the name being based at least in part on a given function of the data which comprise the contents of the data file; and

determine, using at least the name, whether an authorized or licensed copy of the data file is present on a particular one of said computers.

106. (Previously Added) Media as in claim 105 wherein the given function is a message digest function or a hash function.

107. (Currently Amended) A computer system programmed to:

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obtain a list of file names for ~~each of~~ a plurality of files, each of said file names having been determined, at least in part, by applying a function to the contents of the corresponding file; and

determine, using at least said list, whether unauthorized or unlicensed copies of some of the plurality of data files are present on a particular computer.

108. (Previously Added) A computer system as in claim 107 wherein the function is a message digest function or a hash function.

109. (Previously Added) A computer system as in claim 107 wherein the function is an MD5 function.

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110. (New) In a system in which a plurality of files are distributed across a plurality of computers, at least some of the computers forming a peer-to-peer network, a method comprising:

obtaining a name for a data file, the name being based at least in part on a given function of the data, wherein the data used by the given function comprises the contents of the data file; and

in response to a request for the a data file, the request including at least the name of the particular file, causing a copy of the file to be provided from a given one of the plurality of computers, wherein the requested file is only provided to authorized or licensed parties.

111. (New) A method, in a system in which a plurality of files are distributed across a plurality of computers, at least some of the computers forming a peer-to-peer network, the method comprising:

obtaining a name for a data file, the name being based at least in part on a given function of the data, wherein the data used by the function comprises the contents of the data file;

determining whether a copy of the data file is present on a at least one of said computers; and.

determining, using at least the name, whether a copy of the data file that is present on a at least one of said computers is an authorized or licensed copy of the file.

112. (New) A method, in a system in which a plurality of files are distributed across a plurality of computers, the method comprising:

determining whether a copy of a data file is present on a at least one of said computers;

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obtaining a name for a data file, the name being based at least in part on a given function of the data which comprises the contents of the data file; and,

determining, using at least the name, whether a copy of the data file that is present on the at least one of said computers is an authorized or licensed copy of the file.

113. (New) A method as in claim 112 wherein the given function comprises a message digest or a hash function.

114. (New) A method as in claim 113 wherein the given function is selected from the functions: MD4, MD5 and SHA.

115. (New) A method as in claim 112 further comprising:
if a computer is found to have a file that it is not authorized or licensed to have, recording information about the computer.

116. (New) A method as in claim 112, further comprising:
maintaining accounting information relating to data files in the system.

117. (New) A method as in claim 112, further comprising, for at least one computer in the system:

- (a) tracking which data files have been stored on a computer; and
- (b) tracking which data files have been transmitted from a computer.

118. (New) A method, in network in which a plurality of files are distributed across a plurality of computers of the network, the method comprising:

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determining whether a copy of a data file is present on a at least one of said computers, said data file representing one or more of a digital image, a video signal or an audio signal;

obtaining a name for the data file, the name being based at least in part on an MD5 function of the data which comprises the contents of the data file; and,

when a copy of the data file is found to be present on one of the computers, determining, using at least the name, whether the copy of the data file is an authorized or licensed copy of the data file; and

if a computer is found to have a file that it is not authorized or licensed to have, recording information about the computer or the data file.

119. (New) In network in which a plurality of files are distributed across a plurality of computers of the network, a method comprising:

for each file of a plurality of data files,

(a) determining whether a copy of the file data file is present on a at least one of said computers;

(b) obtaining a name for the data file, the name being based at least in part on an MD5 function of the data which comprises the contents of the data file;

(c) when a copy of the data file is found to be present on one of the computers, determining, using at least the name, whether the copy of the data file is an authorized or licensed copy of the data file; and,

(d) if a computer is found to have a file that it is not authorized or licensed to have, recording information about the computer or the data file.

120. (New) A method, in a system in which a plurality of files are distributed across a plurality of computers, the method comprising:

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obtaining a name for a data file, the name being based at least in part on a given function of the data, wherein the data used by the given function comprises the contents of the data file; and

determining, based at least in part on the obtained name, whether a copy of the data file that is present on a at least one of said computers is an authorized or licensed copy of the file.

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